



National Agromet Advisory Service Bulletin
Based on
Extended Range Weather Forecast (ERFS)

Validity for 25th May to 7th June 2018

Date of issue: 25th May 2018

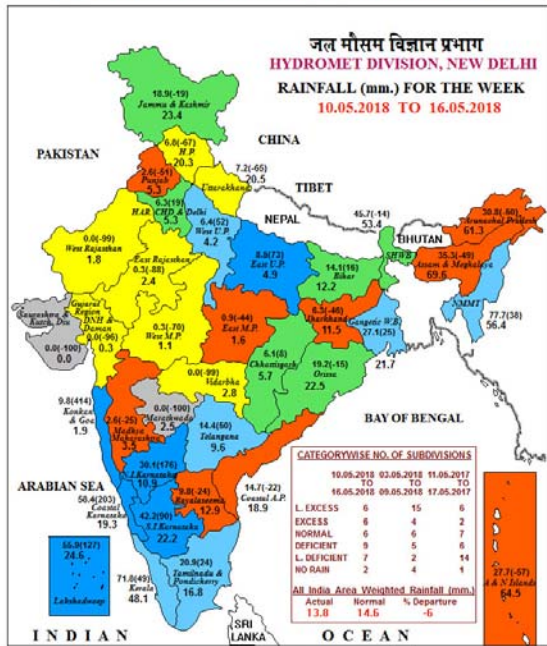
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&
Earth System Science Organization
India Meteorological Department

Realized Rainfall and Extended Range Forecast (Rainfall and Temperatures)

Realized Rainfall

(10th May to 23rd May 2018)

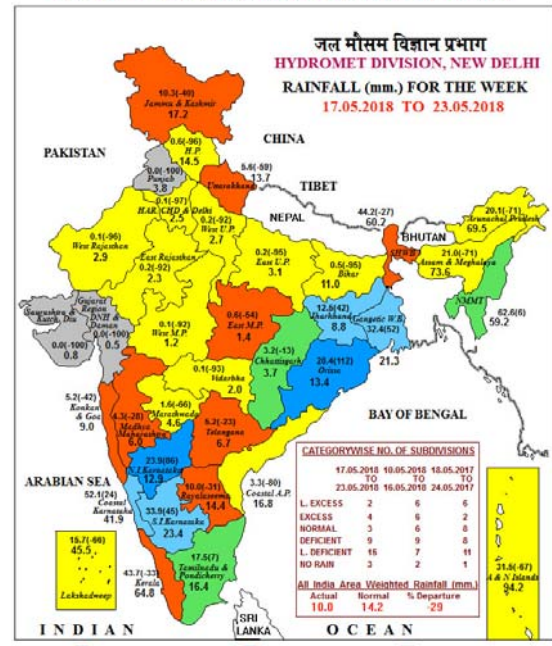
भारत मौसम विज्ञान विभाग INDIA METEOROLOGICAL DEPARTMENT



LEGEND: L. EXCESS (+60% OR MORE) EXCESS (+20% TO +59%) NORMAL (+19% TO -19%) DEFICIENT (-20% TO -59%) L. DEFICIENT (-60% TO -99%) NO RAIN (-100%) NO DATA

NOTES:
[a] Rainfall figures are based on operational data.
[b] Small figures indicate actual rainfall [mm.], while bold figures indicate Normal rainfall [mm.]
Percentage Departures of Rainfall are shown in Brackets.

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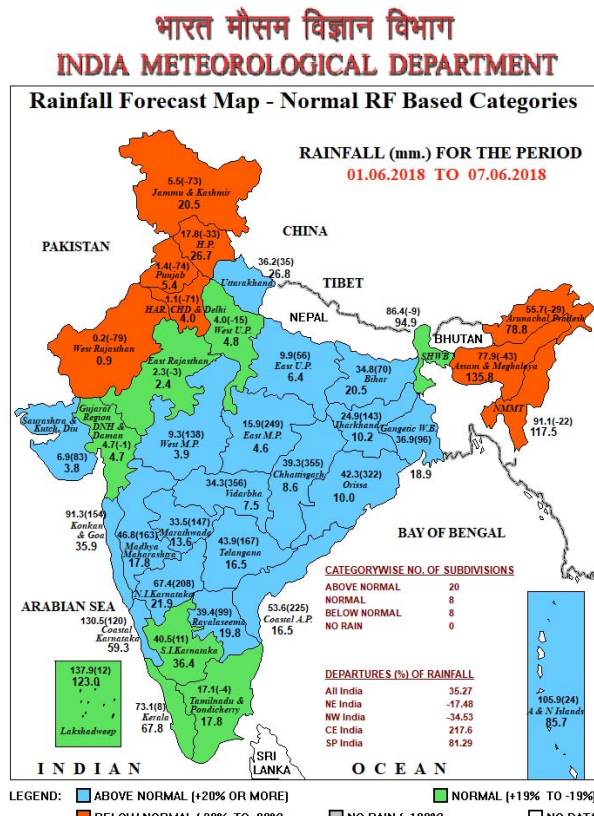
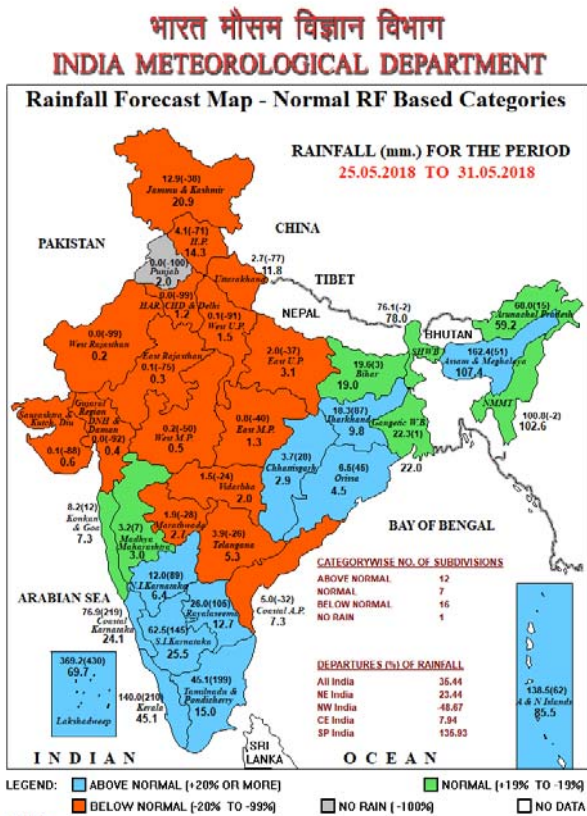
NOTES:
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[b] Small figures indicate actual rainfall [mm.], while bold figures indicate Normal rainfall [mm.]
Percentage Departures of Rainfall are shown in Brackets.

- Normal or above normal rainfall occurred during last two weeks in Gangetic West Bengal, NMMT (Nagaland, Manipur, Mizoram and Tripura), Odisha, Chhattisgarh, Karnataka and Tamil Nadu.
- Normal or above normal rainfall occurred in either of the last two weeks in Jammu & Kashmir, Haryana Chandigarh & Delhi, Uttar Pradesh, Bihar, Sub-Himalayan West Bengal & Sikkim, Jharkhand, Telangana, Konkan & Goa, Kerala and Lakshadweep.
- Below normal rainfall occurred in both the weeks in Uttarakhand, Himachal Pradesh, Rajasthan, Madhya Pradesh, Arunachal Pradesh, Assam & Meghalaya, Madhya Maharashtra, Vidarbha, Coastal Andhra Pradesh, Rayalaseema and Andaman & Nicobar Islands.
- No rain occurred in both the weeks in Saurashtra & Kutch.

Extended Range Forecast System

Rainfall forecast maps for the next 2 weeks (IC – 23 May)

(25th May to 7th June 2018)



Extended Range Rainfall Forecast

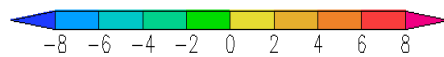
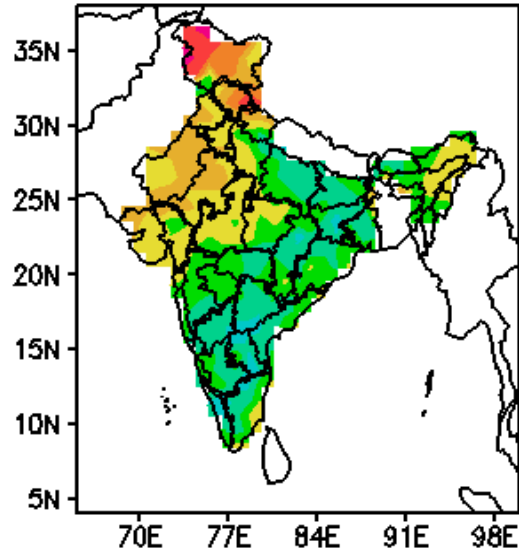
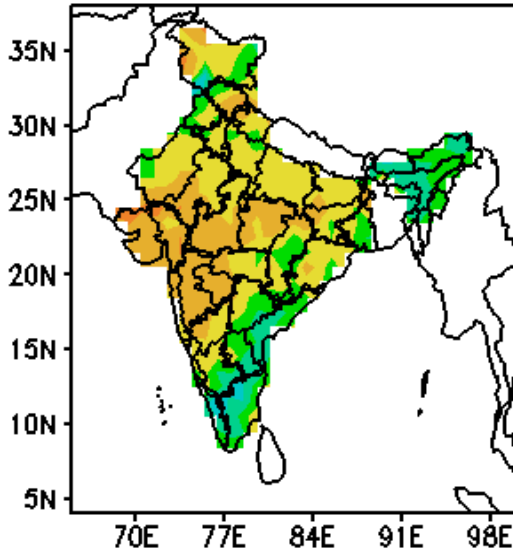
- **Week 1 (25.05.2018 to 31.05.2018) and Week 2 (01.06.2018 to 07.06.2018):** Southeast Arabian Sea and adjoining Kerala/coastal Karnataka region is expected to get the rainfall during the week with likely onset. Pre-monsoon rainfall to continue over the Northeast India. Monsoon is expected to cover more part in week 2 over central India.

Maximum and Minimum temperature anomaly ($^{\circ}\text{C}$) forecast for next 2 weeks (IC – 23 May)
(25th May to 7th June 2018)

MME Bias Corrected Tmax Anomaly (Deg)

(Week1: 25May–31May)

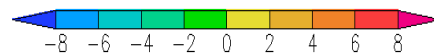
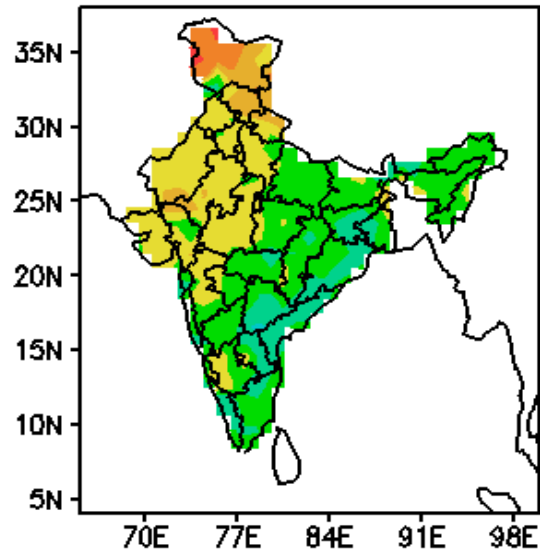
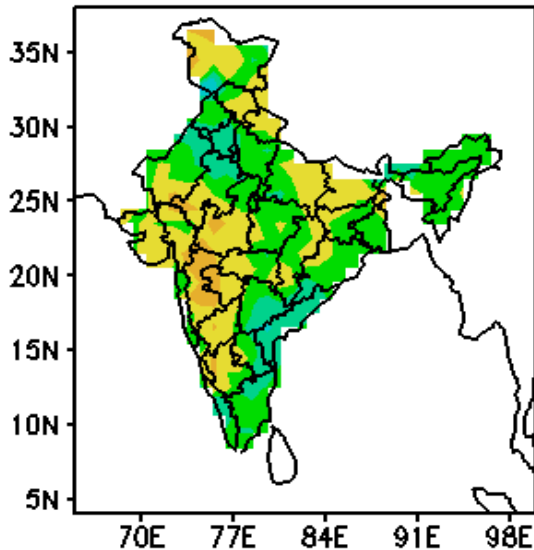
(Week2: 01Jun–07Jun)



MME Bias Corrected Tmin Anomaly (Deg)

(Week1: 25May–31May)

(Week2: 01Jun–07Jun)



Tmax (Maximum Temperature)

- **Week 1 (25.05.2018 to 31.05.2018) and week 2 (01.06.2018 to 07.06.2018):** Tmax positive anomaly to continue over Northwest/western part of India during week 1 and northwest part of India during week 2.

Tmin (Minimum Temperature)

- **Week 1 (25.05.2018 to 31.05.2018) and week 2 (01.06.2018 to 07.06.2018):** Slightly above Normal Tmin over Northwest and wes-central Parts of India during week 1 & 2 and rest is mostly close to normal.

Strategic Agricultural Planning based on rainfall during next two weeks till 26th April 2018

Agromet Advisories

Tamil Nadu

Rainfall Situation

Rainfall received during the period of 01 March to 23 May 2018 over Tamil Nadu is 126.0 mm, which is 12% excess as compared to the normal. The extended range weather forecast provided for next two weeks (25 to 31 May and 01 to 07 June) are Above Normal for week-1 and Normal for week-2.

- Prevailing weather condition is favourable for pod borer incidence in pulses. To control spray Indoxacarb 15.8 % SC 333 ml/ha.
- Prevailing moderate to high wind speed may damage banana crops.
- To avoid heat stress due to high temperature on animals provide adequate drinking water and green fodder and spray water on gunny bags surrounding the cattle shed.

Kerala

Rainfall Situation

Rainfall received during the period of 01 March to 23 May 2018 over Kerala is 359.1 mm, which is 20% excess than normal. The extended range weather forecast provided for next two weeks (25 to 31 May and 01 to 07 June) are above Normal for week-1 and Normal for week-2.

- As rainfall is expected planting of seedlings of Coconut can be done. Planting the seedlings during May, with the onset of pre-monsoon rains is ideal. On slopes and in areas of undulating terrain, prepare the land by contour terracing or bunding. In low lying areas and rice fields form mounds to a height of at least 1 m above water level.
- Proper drainage should be ensured in Banana crop. As a precaution, apply lime in the banana basin or bleaching powder in the irrigation channels. To improve the disease resistance, drench the basin with Pseudomonas @ 20g per litre of water. Affected plants can be protected by drenching the basin with 5g bleaching powder or 3g Oxychloride or 2g copper hydroxide per one litre of water. Severely affected plants should be cut and removed to prevent the spread of disease.
- There is a chance of Quick wilt disease due to high relative humidity. Apply Trichoderma or Pseudomonas culture in soil or 1% Bordeaux mixture can be sprayed on the leaves and small branches.

Karnataka

Rainfall Situation

Rainfall has received during the period of 01 March to 23 May 2018 over different meteorological subdivisions of Karnataka viz, North Interior Karnataka is 96.7 mm (48 % excess), South Interior Karnataka is 179.4 mm (51 % excess) and Coastal Karnataka is 189.1 mm (66 % excess). The extended range weather

forecast provided from 25 to 31 May and 01 to 07 June over North Interior Karnataka is above normal in both the weeks, South Interior Karnataka is above normal in week-1 and normal in week-2 and over Coastal Karnataka is above normal in both the weeks.

North Interior Karnataka

- The farmers are advised to take up plant protection measures carefully mixing adhesive gum in the spray mixture in horticultural crops like Pomegranate for bacterial blight, Lime for leaf minor and watermelon for sucking pests.

Maharashtra

Rainfall Situation

Rainfall received during 01 March to 23 May 2018 over different meteorological sub divisions of the state viz., Konkan: 18.2 mm (7% excess), Madhya Maharashtra: 12.9 mm (50% Deficit), Vidarbha: 11.7 mm (56% Deficit) and Marathwada: 12.4 mm (43 % Deficit). The extended range weather forecast provided for next two weeks (25 to 31 May and 01 to 07 June) are below normal in week-1 and Above normal in week-2 for Vidarbha, normal in week-1 and above normal in week-2 in Konkan, below normal for week-1 and above normal for week-2 in Marathwada.

Marathwada

- Select fertile soil with good moisture holding capacity for sowing of cotton crop. Good drainage and aeration are also essential as the crop cannot stand excessive moisture and water logging. Avoid sandy, saline and water logged soils.
- Well-drained sandy and sandy loam soils should be selected for cultivation of groundnut crop. Light soil helps in easy penetration of pegs and their development and also harvesting. Clay or heavy soils are not suitable for this crop.
- For Banana crop, farmers are advised to cover the fruit bunch with green shade net to avoid the direct incidence of the sun rays / to avoid the scorching effect. Then prepare artificial windbreaks and arrange on the borders of banana field.
- For Mango, farmers are advised to select alluvial soils with good amount of organic matter. Soil should be slightly acidic (pH 5.5 to 7.5). Poorly drained soils should be avoided. Due to temperature the quality of fruit may affects. To avoid quality loss, mature mango fruits harvest as early as possible. The harvesting should be done early in the morning.

Konkan

- Farmers are advised to harvest the mature groundnut pods and dry them in sunshine for 4 to 5 days and store them in dry place.
- Harvest the mature mango fruits before 10 hours in the morning and after 16 hours in the evening with the help on Nutan mango harvester at 80 to 85% maturity. Keep the harvested fruits in shade to prevent spongy tissue disease and from heat.
- To avoid post harvest disease infection on fruits, farmers are advised to dip the harvested fruits

immediately after harvest in the warm water (52⁰ C) for 10 minutes and dry it in shade. For ripening of harvested mango fruits dip it in solution of 6.5 gm. Ethrel in 10 lit. of water for 5 minutes and dry it in shade.

- To control red palm weevil affected coconut, prepare a slanting hole with the help of screw drill about 1 m height from ground level on tree trunk and pour about 20 ml of 36 % Monocrotophos or 20% Chlorpyrifos with the help of plastic funnel in the hole and close the hole with the help of cement.
- Clean the arecanut plant by removing dry leaves and other material and spray 1 % Bordomixture to control 'koleroga' disease.

Vidarbha

- With the continuation of heat wave conditions, farmers are advised to provide frequent light irrigation coupled with basin mulching in citrus orchards to reduce heat stress. Provide thatches/shading to young fruit plantation and nurseries to reduce scorching heat stress impact.
- Wherever possible water bodies may be covered or treated with anti-evaporation sprays to check evaporation losses.
- Undertake harvesting of matured summer crops (groundnut, greengram, sunflower etc.) and ensure safe storage/threshing in the event of pre-monsoon rains.
- Provide proper ventilation and heat protection in the animal/poultry sheds. Applying gunny bags/grass on roof of shed with sprinkling of water is advisable to reduce heat impact. Restrict working/grazing of farm/draught animals to morning and evening hours and give them plenty of water to drink.

Gujarat

Rainfall Situation

Rainfall received during the period of 01 March to 23 May 2018 over Gujarat is 0.2 mm, which is 94% deficit than normal. The extended range weather forecast provided for next two weeks are weeks (25 to 31 May and 01 to 07 June) are below normal in week-1 and above normal in week-2 in Saurashtra & Kutch and below normal in week-1 and normal for week-2 in Gujarat region.

- Procurement of good quality seeds is advised to farmers for groundnut and cotton growing farmers.
- Avoid pre-sowing of cotton to prevent pink bollworm infestation. After receiving sufficient rainfall timely sowing is advised
- Reduce irrigations interval in vegetables to avoid high temperature stress.
- Land preparation is advised for Kharif season.
- Farmers are advised to keep animals under shade or in sheds during noon hours of the day, provide cool water for drinking and shower them with cool water twice or thrice in a day.

Rajasthan

Rainfall Situation

Rainfall received over West Rajasthan and East Rajasthan is 4.7 mm rainfall (68% deficit) and 6.8mm (47%deficit) respectively during 01 March to 23 May 2018. The extended range weather forecast provided for two weeks (25 to 31 May and 01 to 07 June) are below normal in both the weeks for West Rajasthan and below normal in week-1 and normal for week-2 for East Rajasthan.

- Keeping in view of high temperatures, farmers are advised for light irrigation as per requirement in all vegetable and standing crops. Irrigation should be done in the morning hours or in the evening hours.
- Procure certified seeds for cotton sowing during the 1st week of June. The improve varieties of cotton are PA-255 (Desi cotton), WagadKalyan (American Cotton), Hybrid-8 and DCH-32(Hybrid cotton).
- Deep ploughing of fields after harvesting of Rabi crops should be done as high temperature is prevailed which is suitable for killing insect's eggs and pupae and weed seeds.
- Optimum moisture level should be maintained in cucurbitaceous crops by light and frequent irrigation as dry conditions may lead to poor pollination and thus drop in yield of the crop.
- Protect poultry birds from heat.

Chhattisgarh

Rainfall situation

47.5 mm of rainfall received over Chhattisgarh during 01 March to 23 May 2018 which is 14% excess as compared to normal . The extended range weather forecast provided for next two weeks are above normal for week-1 and week-2 (25 to 31 May and 01 to 07 June).

- Farmers are advised to regularly monitor summer vegetables crops and irrigate the crop as per need.
- Irrigation management is required in mango, lemon and other fruit trees. Preparation should be done for new fruit gardens and digging the pits at a specified distance can be carried out.
- Presently the maximum temperature is around 42°C and due to hot and dry winds banana and papaya fruits are damaged because of sun scorching. Hence, the farmers are advised to cover the fruits by using leaves or Jute bags to protect the fruits from sun scorching. It is also advised to provide wind breaks in west/north-west direction
- Banana leaves may desiccate due to heat waves. Therefore farmers are advised to cut the dried and yellowish leaves so that transpiration rate will decrease.

Odisha

Rainfall situation

147.3 mm of rainfall received over Odisha during 01 March to 23 May 2018 which is 27% excess than normal. The extended range weather forecast provided for next two weeks (25 to 31 May and 01 to 07 June) are above normal for week-1 and normal for week-2.

- Climate in Orissa is favourable for commercial cultivation of fruit crops, such as mango, coconut, citrus, guava, *sapota*, papaya, banana, litchi and pineapple in uplands, even in marginal lands.
- The pulse crop is at maturity stage. Go for Picking of pods instead of cutting plants. Dry them under sun for 2 to 3 days. And January sown groundnut crop is at maturity stage. Go for harvesting after giving irrigation depending upon the soil moisture content
- Root rot of pointed gourd. Spray 10 g Plantomycine along with 20 g Blitox 50 in 10 litre watre. Thrips in Chilli has been found. Spray 300 ml Ethion or 400 ml Carbosulphan or Chlorpyrifos.
- Mite attack in coconut resulting early fruit drop, small and unusual shape of coconut, fibre not fully developed and attached firmly to the coconut shell causing difficulty in removing fibre from shell.
- Go for sowing of green manuring crops like Dhaincha and sunhemp in the areas receiving convectional rain. Green manuring crops are sown in medium and low land condition at 6-8 weeks before planting. Use 10 kg seeds per acre. Sowing time should be adjusted in such a way that the crop will attain 5-week stage just at 7 days before transplanting.

Bihar

Rainfall situation

The state as a whole has received 37.2 mm of rainfall received during 01 March to 23 May 2018, which is 39% deficit than normal. The extended range weather forecast provided for next two weeks (25 to 31 May and 01 to 07 June) are normal for week-1 and above normal for week-2.

- During the last several days or so, good rainfall has occurred at many places in the North Bihar districts. This has brought adequate moisture in the soil which may be utilized for sowing of turmeric crop from 15th May.
- Monitoring is advised for infestation of fruit borer in tomato crop. If infestation of fruit borer is found, installation of bird perches in tomato crop is advised. Hand picking of damaged fruit and burying are also advised. Spraying of Spinosad 48EC@1ml/4 litres of water is advised under clear sky condition, if pest population reaches ETL.
- Farmers are advised to administer vaccination to their cattle against Foot and Mouth disease ten days after providing the medicine for worms. Give 50 gm common salt and 50 gm mineral mixture every day to animals.

Jharkhand

Rainfall Situation

The state as a whole has received 67.9 mm of rainfall received during 01 March to 23 May 2018, which is 3% excess than normal. The extended range weather forecast provided for next two weeks (25 to 31 May and 01 to 07 June) are above normal for week-1 and normal for week-2.

- In Rice, timely transplanted crop is at grain filling stage and this stage is sensitive of moisture stress.

Hence, maintain the water level in the field. In some pockets, late transplanted crops are attacked by either the insect leaf roller or stem borer. Spray the insecticide Monocrotophos or Trizophos @ 2.5 ml per litre of water to control these insect during evening and clear weather condition.

- Farmers, who are wishing to cultivate the crop of ginger, turmeric or elephant foot yam (Oal) are advised to prepare the land and sow the seed immediately after expected rain. Before sowing, a light irrigation is needed in case of deficit soil moisture.
- There is possibility of attack of heat stroke in animals due to prevailing high day temperature. Hence, animals should be protected against intense heat and should not allow them to expose in sunlight during noon and arrange fresh and plenty of water for drinking.

West Bengal

Rainfall Situation

Rainfall received over SHWB & Sikkim is 329 mm rainfall (10% deficit) and Gangetic West Bengal is 156mm (15% excess) during 01 March to 23 May 2018. The extended range weather forecast provided for (25 to 31 May and 01 to 07 June) are normal for week-1 and above normal for week-2.

- Complete the intercultural operations and after that apply top dressing in Jute. For crops of three-week stage, apply 6 to 7 Kg Urea (per bigha) as first top dressing and for crops of six-week stage apply the same amount of fertilizer as second top-dressing. At present attack of jute semilooper, Bihar hairy caterpillar and stem weevil is becoming severe. To control it, farmers are advised to apply Dichlorvos @3 ml per 4 litre of water or Endosulphan 2 ml per litre of water.
- Timely sown sesame is now in pod development and maturity stage. Protect your crops from lodging from heavy rainfall. To reduce pod borer infestation apply Endosulphan @2ml per litre of water.
- In pumpkin, ridge-gourd, pointed gourd and cucumber, there is a chance of attack of Red-Pumpkin Beetle in the weather condition. To control the pest apply Dimecron or rogor (1ml per lt of water).

Madhya Pradesh

Rainfall Situation

Rainfall received over West Madhya Pradesh and East Madhya Pradesh is 3.7 mm rainfall (63% deficit) and 14.3mm (36%deficit) respectively during 01 March to 23 May 2018. The extended range weather forecast provided for (25 to 31 May and 01 to 07 June) are below normal for week-1 and above normal for week-2 in West Madhya Pradesh and below normal for week-1 and Above normal for week-2 in East Madhya Pradesh.

- Due to high temperature, farmers are advise to apply pest protection measures in tomatoes, egg plant and okra . For controlling sucking pests, spray of Malathion at 2 ml/litre water. For controlling caterpillar, spray of Triazaphos at 750 ml/500-600 litres of water. Apply insecticide after harvesting of fruits.
- As mango fruit size is increasing, farmers are advised to apply spray of urea at 20 g/litre water to control fruit drop , and also to increase in fruit size. Apply irrigation in 20-25 days interval.
- As day temperature is increasing, keep fresh water stock in the shed for drinking for the cattle and poultry birds.
- Apply sprinkler irrigation over the shed of poultry houses.

Assam

Rainfall Situation

Rainfall received over Assam is 336.4 mm rainfall (32% deficit) during 01 March to 23 May 2018. The extended range weather forecast provided for (25 to 31 May and 01 to 07 June) are above normal for week-1 and below normal for week-2.

- Due to favourable weather conditions, Infestation in summer vegetables by two spotted spider mite may be seen in farmer's field. Infestation of this pest may cause symptoms like downward rolling of leaves and further it dries up. To control these pest, farmers are advocated to spray Fenpyroximate 5 EC@ 1 tea spoon per 5 litre of water.
- As optimum quantity of rainfall is forecasted in the coming 5 days, summer ploughing in rice fields is advocated. This will kill the eggs and larvae of insects and also will help in moisture conservation in soil.
- Vaccination should be taken against Foot & Mouth disease, BQ, SH and other bacterial diseases in cattle and buffaloes before the start of monsoon season.

Punjab

Rainfall Situation

Punjab has received 25.2mm of rainfall during 01 March to 23 May 2018, which is 51% deficit. The extended range weather forecast provided for next two weeks (25 to 31 May and 01 to 07 June) is below normal for week-1 and week-2.

- Eradicate the weeds like kanghi buti, peeli buti, puth kanda etc growing on cotton field bunds, waste lands, road side and irrigation channels/canals to avoid further spread of whitefly to cotton field.
- Control the weeds from the sugarcane crop.
- To control the damage caused by tobacco caterpillar (*Spodoptera litura*) in summer moong, spray 800 g of Asataf 75 SP (acephate) or 1.5 litres of Dursban 20 EC (Chlorpyrifos) using 100 litres of water per acre with manually operated knapsack sprayer.
- Onion thrips should be checked by spraying 250 ml Malathion 50 EC in 80 litres of water per acre. Do not spray during 7 days before harvest.
- To avoid the adverse effect of hot weather on fruit trees, apply white-wash on the trunks of the trees if it is not done earlier.

Haryana

Haryana has received 22.0mm of rainfall during 01 March to 23 May 2018, which is 29% deficit. The extended range weather forecast provided for next two weeks (25 to 31 May and 01 to 07 June) is below normal for week-1 and week-2.

- Farmers are advised to apply irrigation in Fruits and Vegetables. Keep proper management to protect the small fruit crop from heat waves.
- Keep animals inside of shade while aberrant weather. Provide clean drinking water sufficiently. Give

shower to animals to overcome the heat stress. Provide balanced feed.

Jammu

Rainfall Situation

Rainfall received during 01 March to 23 May 2018 over Jammu is 239.8 mm, which is 23% deficit. The extended range weather forecast provided for next two weeks (25 to 31 May (week-1) and 01 to 07 June (week-2) over Jammu is below normal for both the weeks.

- Due to high evaporation, irrigate crop as per requirement. Hoeing and weeding may be taken up to conserve soil moisture and control weeds.
- Apply carbaryl @ 2g/lit or cypermethrin @ 1ml/lit of water against pumpkin beetle. To control mosaics of cucurbits remove the vines of infected plants and spray imidacloprid @ 0.5% to control vectors and check the further spread.
- Due to rise in temperature protect young fruit plants from heat by providing thatches /cover but ensure free circulation of air.

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